



PowerPC Technology and Macintosh Systems

Ready
for
PowerPC
upgrade.

In the first half of 1994, Apple will introduce the first Macintosh computers based on PowerPC microprocessors. PowerPC processors streamline the internal workings of computers through a technology known as reduced instruction-set computing (RISC). These processors will create the foundation for a new generation of Macintosh computers that will offer significant performance increases and new capabilities, while preserving compatibility with existing software and peripherals.

It is important to note that these computers will be Macintosh systems:

- They will use the Macintosh System 7 operating system, so they will have the same user interface as today's Macintosh systems.
- They will run thousands of today's Macintosh applications—plus exciting new applications.
- They will support nearly all current Macintosh hardware products.
- And they will work well with today's Macintosh models. They'll be able to share data and coexist on a network.

Apple will first incorporate PowerPC processors into midrange and high-end Macintosh models. In the future, we will offer PowerPC technology throughout the Macintosh product line.

Upgrading to PowerPC

Apple knows that many customers will want to upgrade their existing Macintosh systems to take advantage of PowerPC performance. The "Ready for PowerPC upgrade" label on a Macintosh system you buy today is your assurance that the computer can be upgraded later to take advantage of this exciting technology.

Currently, we plan to offer PowerPC upgrades for the following systems:

- Macintosh IIvx
- Macintosh Centris 610, 650, and 660AV
- Macintosh Quadra 610, 650, 660AV, 800, and 840AV
- Macintosh Performa 600

Apple and third-party developers are working to create upgrades for other Macintosh models as well. Details on upgrade options will be made available when specific PowerPC processor-based Macintosh products are announced.

Macintosh on PowerPC: Key Points

Every current or prospective Macintosh user should keep in mind three points about a RISC-based Macintosh system:

- It's a Macintosh.
- It's compatible.
- It offers tremendous performance.

It's a Macintosh.

Apple is moving the Macintosh operating system—System 7—to PowerPC technology. These new models will look, act, and feel like Macintosh systems, so current Macintosh users will require no retraining.

It's compatible.

The transition to PowerPC processor-based Macintosh systems will be very easy for Apple customers. Because Apple develops both the hardware and the operating software for Macintosh systems, we can completely integrate PowerPC technology.

You can continue to buy whatever applications and peripherals you need today with confidence that you'll be able to use them with Apple's upcoming RISC-based systems.

Most of today's Macintosh applications will run, without modification, on PowerPC processor-based Macintosh models. They can run simultaneously with applications written expressly for the PowerPC processor; you won't have to switch to any special emulation mode or make any changes to your normal operations. With a product such as Insignia Solutions' SoftPC, you'll also be able to run Windows and MS-DOS software, taking advantage of the high performance of the PowerPC processor.

Compatibility is not limited to applications. Current printer drivers, control panel files, fonts, system extensions, and other software will also work on PowerPC processor-based Macintosh systems. So will existing NuBus cards, printers, hard disks, scanners, CD-ROM drives, mice, keyboards, and other Macintosh peripherals.

It offers tremendous performance.

Apple expects the performance of applications written for PowerPC systems to be two to four times as fast as the same applications running on today's Motorola 68040 and Intel 80486 systems. This will significantly enhance the speed of common computer tasks such as recalculating spreadsheets and drawing graphics. A number of leading software developers have already announced their intention to offer new versions of their applications for PowerPC systems, so a wide variety of powerful applications will be available.

But the real promise of PowerPC technology is that it will enable Apple and other developers to deliver new capabilities on Macintosh systems that are not available on other personal computers.

Why PowerPC?

The PowerPC processor family is being developed by Apple, IBM, and Motorola. With this alliance of industry leaders, the PowerPC processor project brings:

- *A mainstream standard backed by major vendors.* PowerPC processors should quickly become the largest-volume RISC processors in the world, and a serious alternative to the Intel 80x86 standard.

- *A scalable architecture that can be used in all Macintosh systems.* Until now, RISC microprocessors have been optimized for high-end workstations and servers. PowerPC technology will bring the advantages of RISC to all segments of the personal computing market. Apple has already announced its commitment to moving its entire product line to RISC technology.
- *Industry-leading technology.* The involvement of IBM and Motorola brings state-of-the-art expertise in both microprocessor design and manufacturing to the PowerPC processor project.
- *Parallel designs.* Several different versions of the PowerPC processor are being developed simultaneously, allowing all types of personal computers to benefit from PowerPC technology quickly.
- *Proven high-volume production.* RISC processors today are principally used by lower-volume vendors. Motorola and IBM have proved their ability to manufacture the millions of units needed for the personal computer market.
- *Superior development tools.* To be successful, any new microprocessor architecture must provide excellent software development tools. Because PowerPC is derived from an existing IBM processor, many compatible development products already exist. Others are being created expressly for the PowerPC processor-based Macintosh platform.

In short, the alliance of Apple, IBM, and Motorola is producing not just a new RISC architecture, but a new level of performance for personal computers.

For more information

Apple is the only personal computer vendor that can combine PowerPC processors with the renowned Macintosh ease of use to create an exciting new generation of high-performance personal computers.

If you'd like more information on PowerPC processor-based Macintosh systems, please ask your Apple reseller for a copy of *PowerPC Technology: The Power Behind the Next Generation of Macintosh Systems*.